

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number  
**WO 2005/001196 A1**

(51) International Patent Classification<sup>7</sup>: **D21C 9/02**,  
9/08, 9/153, 9/14

(21) International Application Number:  
PCT/FI2004/000373

(22) International Filing Date: 17 June 2004 (17.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
20030984 30 June 2003 (30.06.2003) FI

(71) Applicant (for all designated States except US): **ANDRITZ OY** [FI/FI]; Tammasaarenkatu 1, FI-00180 Helsinki (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HENRICSON, Kaj** [FI/FI]; Munkkiniemen puistotie 12 A 19, FI-00330 Helsinki (FI). **PIKKA, Olavi** [FI/FI]; Alhonkatu 15, FI-48600 Karhula (FI). **TERVOLA, Pekka** [FI/FI]; Piilopolku 3 D 23, FI-02130 Espoo (FI).

(74) Agent: **ANDRITZ OY**; Patent Department, P.O. Box 500, FI-48601 Kotka (FI).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

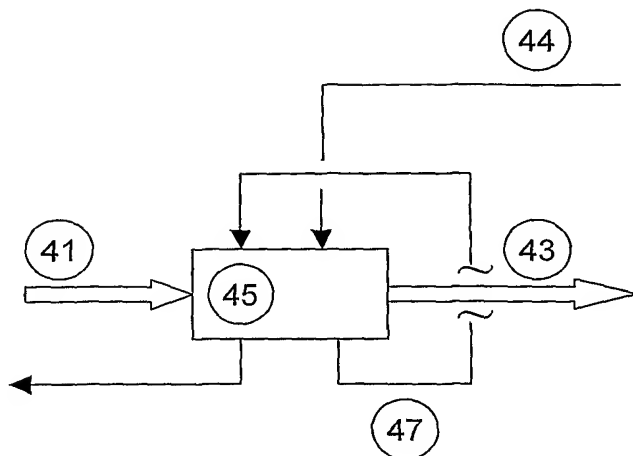
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

[Continued on next page]

(54) Title: METHOD FOR TREATING PULP IN CONNECTION WITH THE BLEACHING OF CHEMICAL PULP



(57) Abstract: The present invention relates to a method of treating pulp in connection with the bleaching of chemical pulp, said method comprising treating of the pulp in at least an ozone, chlorine dioxide or alkali phase and thereafter washing of the pulp in a washing device having an  $E_{10}$  value of at least 3, whereby washing liquid is introduced into the washing device countercurrently in relation to the pulp and filtrate is discharged from the washing device. At first the pulp is washed in the washing device so that the washing liquid is filtrate obtained from the washing device itself and the amount of thus circulated washing liquid is 1.5 - 3.5 t/adtpulp, whereafter the pulp is washed with liquid introduced from outside the washing device, the amount of said liquid being such that the dilution factor in the latter wash is less than 1 t/adtpulp and that the total amount of washing liquid used in the washing device is such that the dilution factor is more than 0 t/adtpulp.



---

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*